

Product Name: Adenine sulfate

Product Number: A026

CAS Number: 321-30-2

Molecular Formula: $C_5H_5N_5 \cdot 0.5(H_2SO_4)$

Molecular Weight: 184.17

Form: Powder

Appearance: White powder

Storage Conditions: 2-8°C

Description: Adenine sulfate is a purine nucleobase involved in a variety of cellular processes and is one of five nitrogenous bases involved in nucleic acid synthesis. In addition, adenine serves as the purine base in adenosine triphosphate (ATP). Adenine is a component of nicotinamide adenine dinucleotide (NAD), and flavin adenine dinucleotide (FAD).

Plant Biology Applications Adenine sulfate is commonly used as a media supplement to serve as a cytokinin biosynthesis precursor. Adenine sulfate promoted organogenesis and *in vitro* flowing of dill, a medically important species to the pharmaceutical industry (Jana and Shekhawat, 2010). The addition of adenine sulfate enhanced organogenesis in *Vitex vinifolia*, a shrub popular for its medicinal use (Samantaray, 2013).

References:

Chen, MH, Wang PJ and Maeda E (1987) Somatic embryogenesis and plant regeneration in *Carica papaya* L. tissue culture derived from root explants. Plant Cell Rep. 6(5):348-351 24248842

Jana S and Shekhawa GS (2011) Plant growth regulators, adenine sulfate and carbohydrates regulate organogenesis and *in vitro* *em./em> floweing of Anethum graveolens*

Naaz A, Shahzad A, Anis M (2014) Effect of adenine sulfate interaction on growth and development of shoot regeneration and inhibition of shoot tip recrosis under *in vitro* condition in adult *Syzygium cumini* L.—a multipurpose tree. Appl. Biochem. Biotechnol 173(1):90-102 PMID 24682901

Samantaray S, Bishoyi AK, Maiti S (2013) Plant regeneration from callus cultures of *Vitex trifolia* (Lamiales: Lamiaceae): A potential medicinal plant. Rev. Biol. Trop. 61(3):1083-1094. 24027909